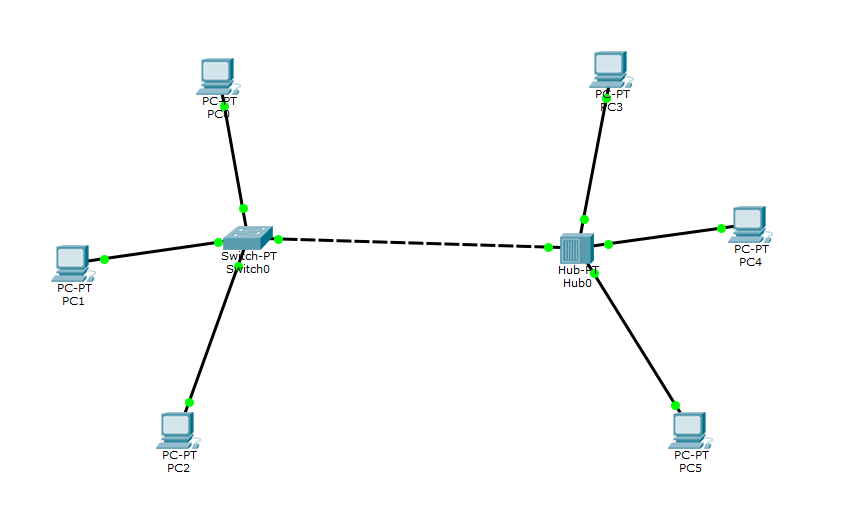
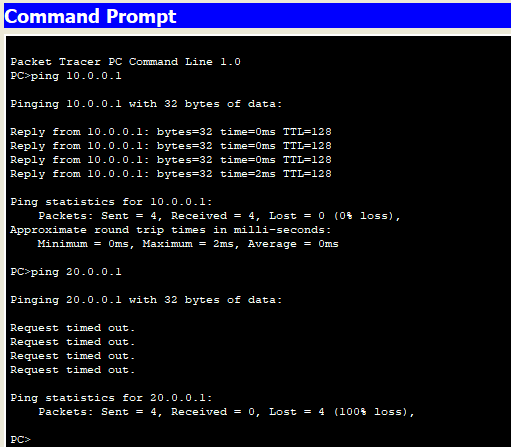
Laboratory Program 1

Topology

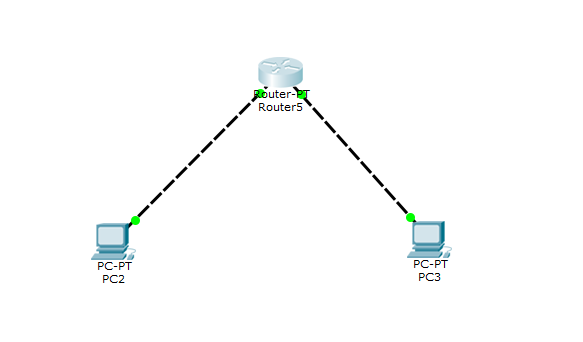


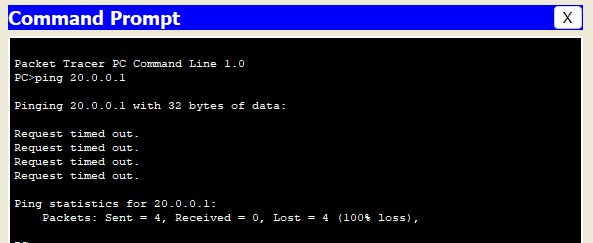
Output

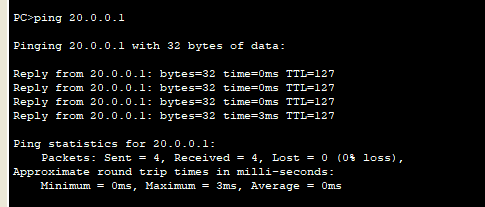


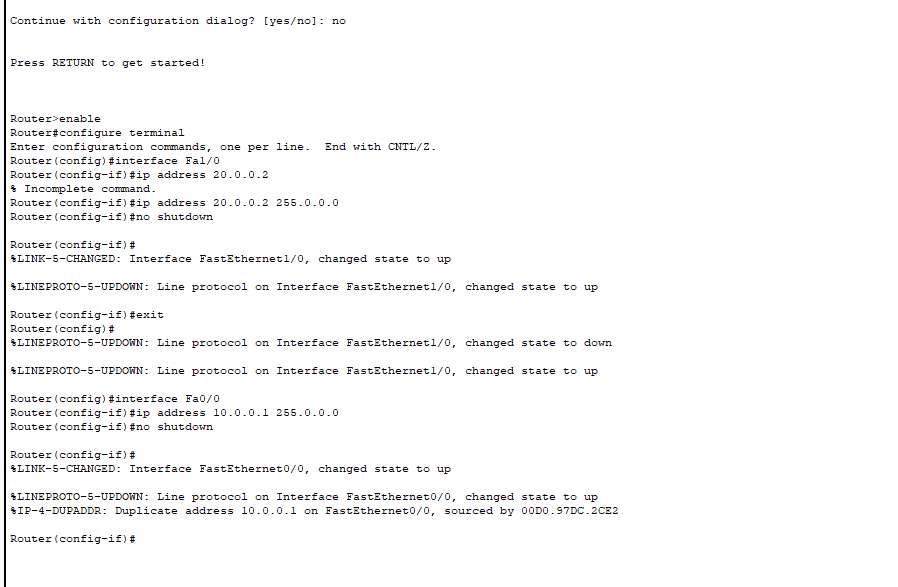
Laboratory Program 2

Part 1

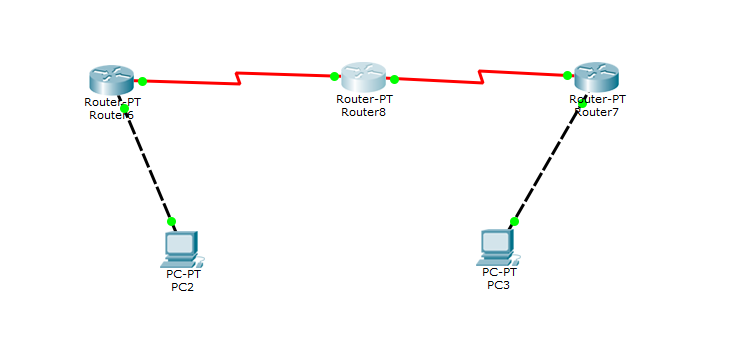


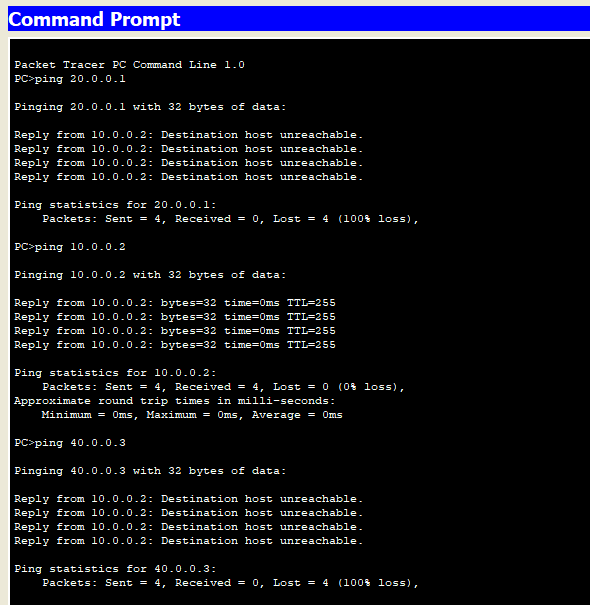






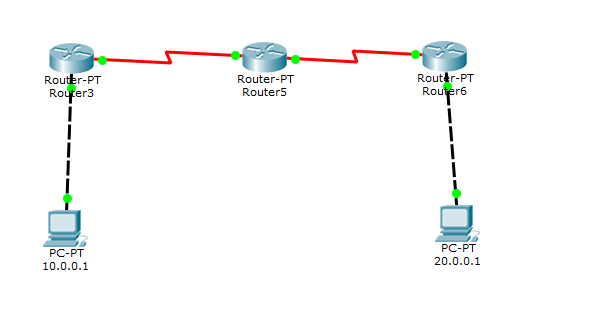
Part 2





Laboratory Program 3

Part 1



Router Configuration

/\*Router3\*/

Router>enable

Router#configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#ip route 20.0.0.0 255.0.0.0 30.0.0.1

Router(config)#ip route 40.0.0.0 255.0.0.0 30.0.0.1

Router(config)#exit

Router#

%SYS-5-CONFIG\_I: Configured from console by console

Router#show ip route

Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP

D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area

N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2

E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP

i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area

\* - candidate default, U - per-user static route, o - ODR

P - periodic downloaded static route

Gateway of last resort is not set

C 10.0.0.0/8 is directly connected, FastEthernet0/0

S 20.0.0.0/8 [1/0] via 40.0.0.4

[1/0] via 30.0.0.1

C 30.0.0.0/8 is directly connected, Serial2/0

S 40.0.0.0/8 [1/0] via 30.0.0.1

/\*Router5\*/

Router>enable

Router#configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#ip route 20.0.0.0 255.0.0.0 40.0.0.4

Router(config)#ip route 10.0.0.0 255.0.0.0 30.0.0.2

Router(config)#exit

Router#

%SYS-5-CONFIG\_I: Configured from console by console

Router#show ip route

Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP

D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area

N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2

E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP

i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area

\* - candidate default, U - per-user static route, o - ODR

P - periodic downloaded static route

Gateway of last resort is not set

S 10.0.0.0/8 [1/0] via 30.0.0.2

S 20.0.0.0/8 [1/0] via 40.0.0.4

C 30.0.0.0/8 is directly connected, Serial2/0

C 40.0.0.0/8 is directly connected, Serial3/0

/\*Router6\*/

S 10.0.0.0/8 [1/0] via 40.0.0.3

C 20.0.0.0/8 is directly connected, FastEthernet0/0

C 40.0.0.0/8 is directly connected, Serial3/0

Router#configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#ip route 30.0.0.0 255.0.0.0 40.0.0.3

Router(config)#ip route 10.0.0.0 255.0.0.0 40.0.0.3

Router(config)#exit

Router#

%SYS-5-CONFIG\_I: Configured from console by console

Router#show ip route

Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP

D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area

N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2

E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP

i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area

\* - candidate default, U - per-user static route, o - ODR

P - periodic downloaded static route

Gateway of last resort is not set

S 10.0.0.0/8 [1/0] via 40.0.0.3

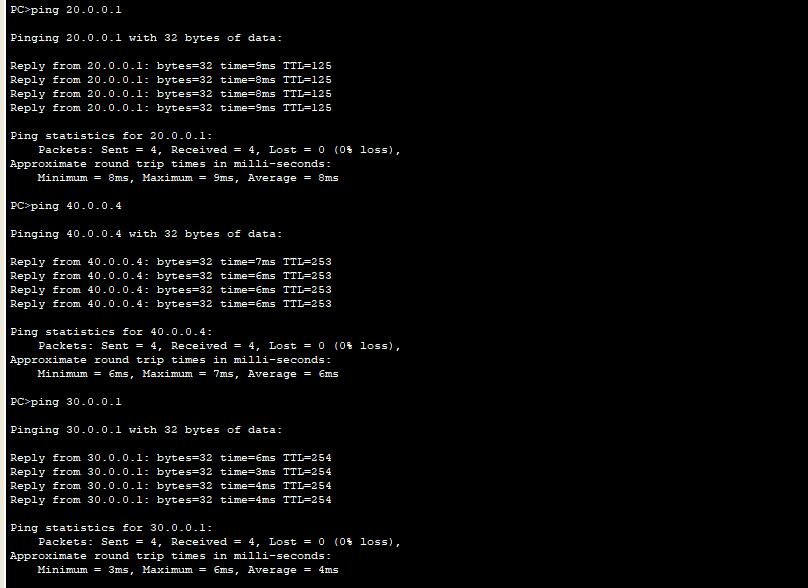
[1/0] via 30.0.0.1

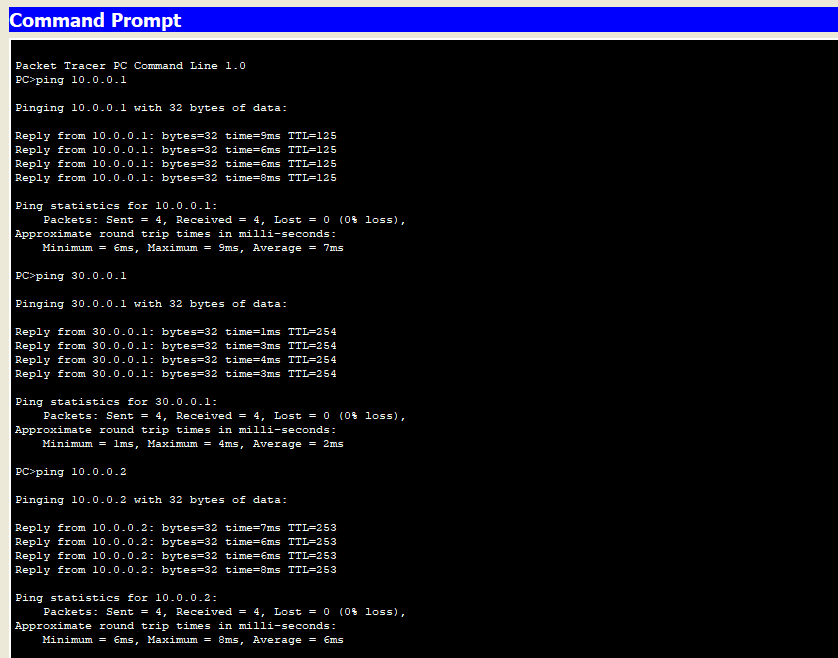
C 20.0.0.0/8 is directly connected, FastEthernet0/0

S 30.0.0.0/8 [1/0] via 40.0.0.3

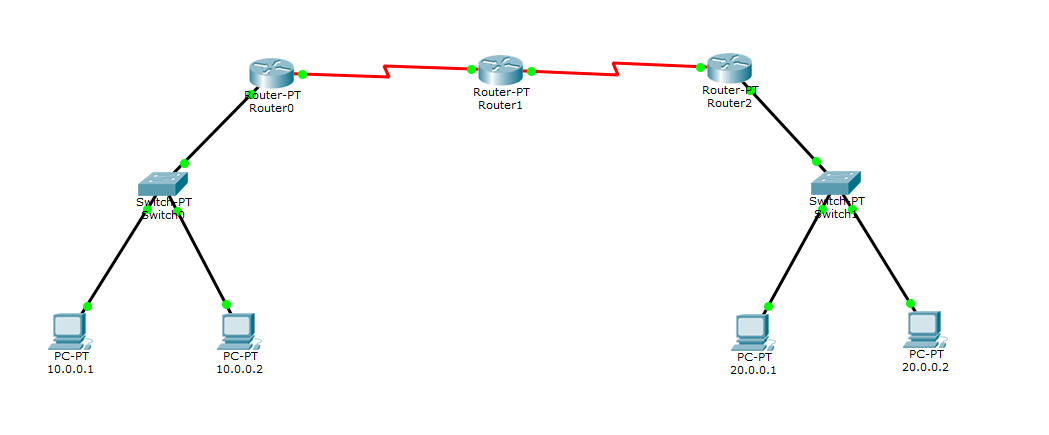
C 40.0.0.0/8 is directly connected, Serial3/0

Output





Part 2



Router Configuration

/\*Router 1\*/

Router(config-if)#exit

Router(config)#ip route 0.0.0.0 0.0.0.0 30.0.0.2

Router(config)#exit

Router#

%SYS-5-CONFIG\_I: Configured from console by console

Router#show ip route

Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP

D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area

N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2

E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP

i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area

\* - candidate default, U - per-user static route, o - ODR

P - periodic downloaded static route

Gateway of last resort is 30.0.0.1 to network 0.0.0.0

C 10.0.0.0/8 is directly connected, FastEthernet0/0

C 30.0.0.0/8 is directly connected, Serial2/0

S\* 0.0.0.0/0 [1/0] via 30.0.0.1

[1/0] via 30.0.0.2

/\*Router 2\*/

Router(config)#ip route 10.0.0.0 255.0.0.0 30.0.0.1

Router(config)#ip route 20.0.0.0 255.0.0.0 40.0.0.2

Router(config)#exit

Router#

%SYS-5-CONFIG\_I: Configured from console by console

Router#show ip route

Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP

D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area

N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2

E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP

i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area

\* - candidate default, U - per-user static route, o - ODR

P - periodic downloaded static route

Gateway of last resort is not set

S 10.0.0.0/8 [1/0] via 30.0.0.1

S 20.0.0.0/8 [1/0] via 40.0.0.2

C 30.0.0.0/8 is directly connected, Serial2/0

C 40.0.0.0/8 is directly connected, Serial3/0

/\*Router 3\*/

Router(config-if)#exit

Router(config)#ip route 0.0.0.0 0.0.0.0 40.0.0.1

Router(config)#exit

Router#

%SYS-5-CONFIG\_I: Configured from console by console

Router#show ip

% Incomplete command.

Router#show ip route

Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP

D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area

N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2

E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP

i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area

\* - candidate default, U - per-user static route, o - ODR

P - periodic downloaded static route

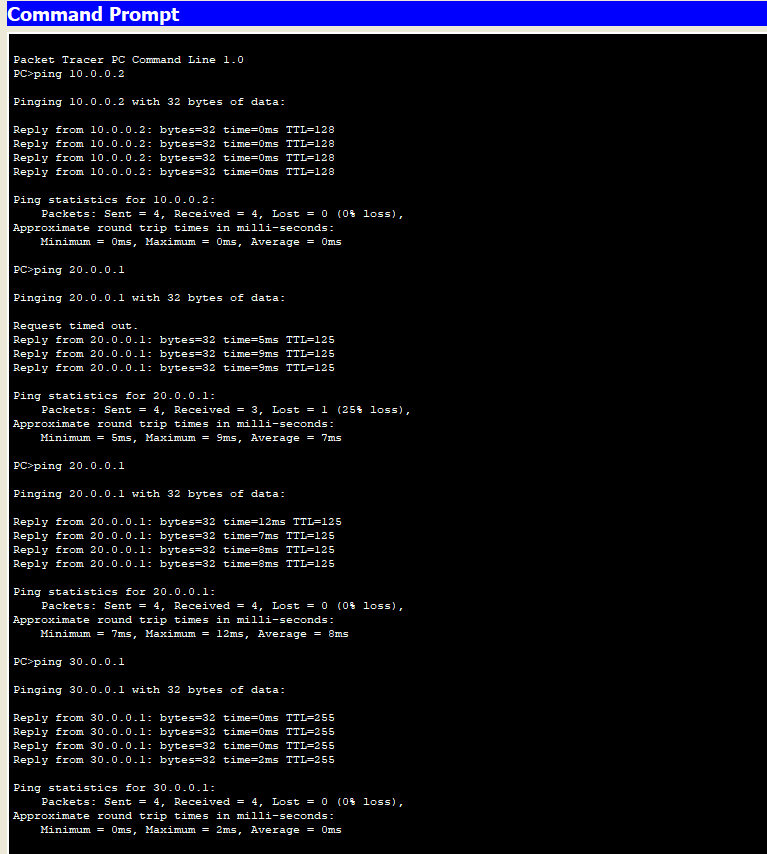
Gateway of last resort is 40.0.0.1 to network 0.0.0.0

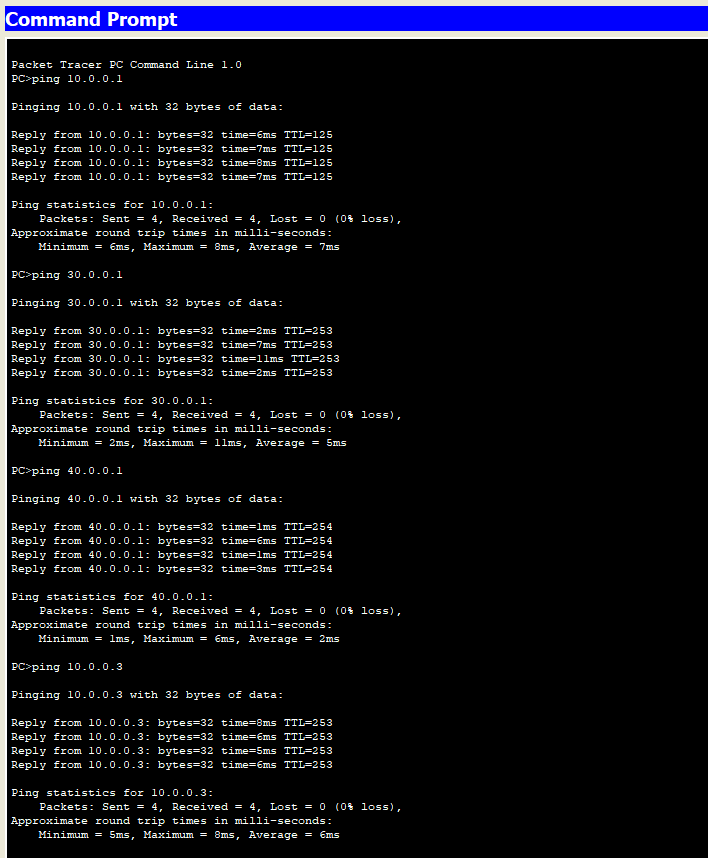
C 20.0.0.0/8 is directly connected, FastEthernet0/0

C 40.0.0.0/8 is directly connected, Serial3/0

S\* 0.0.0.0/0 [1/0] via 40.0.0.1

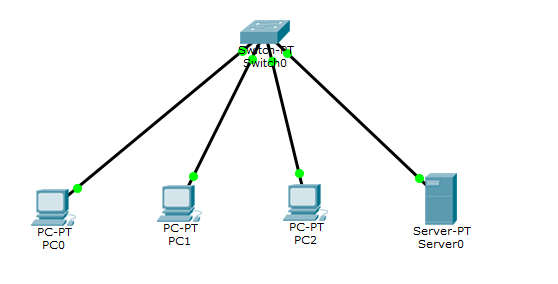
Output



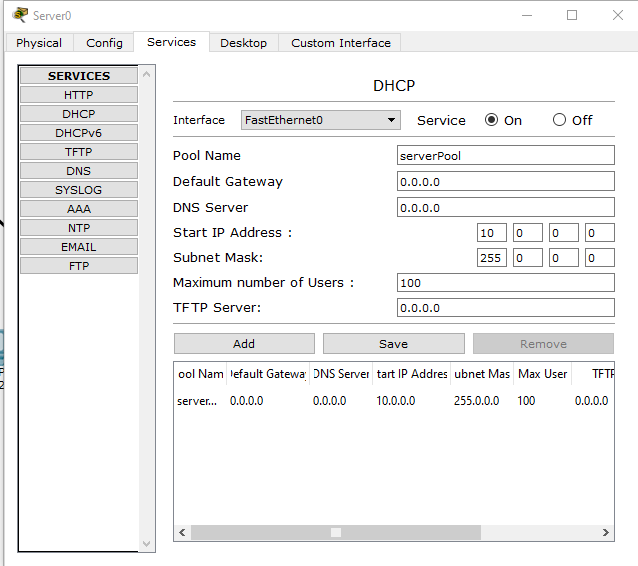


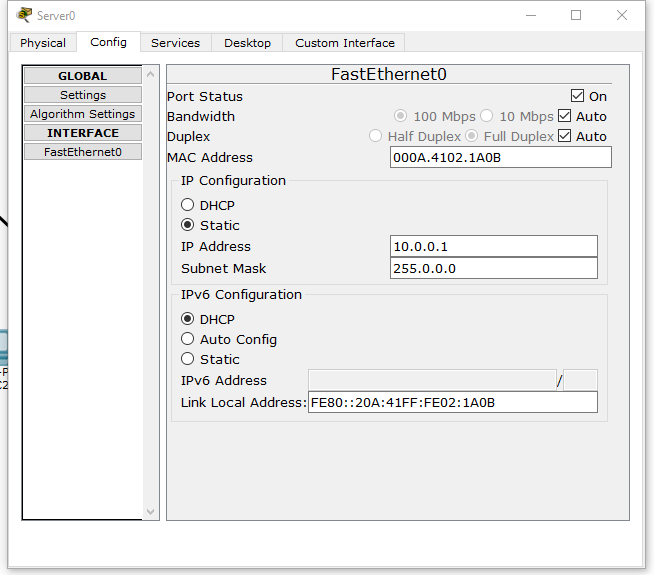
Laboratory Program 4

Part 1 – Internal LAN

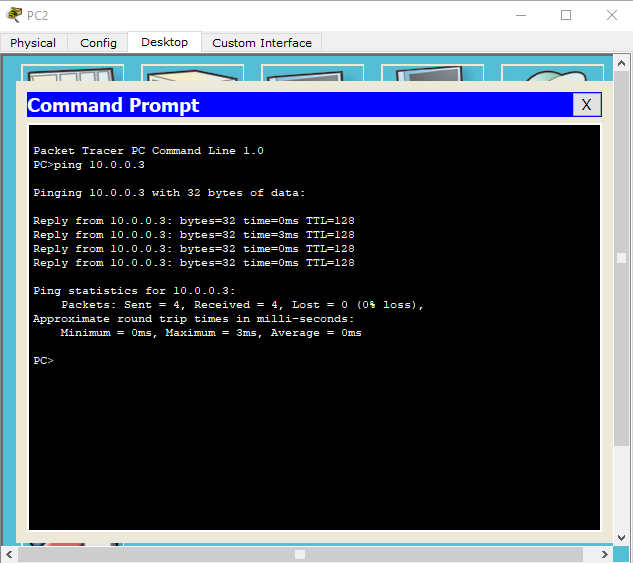


Server Configuration

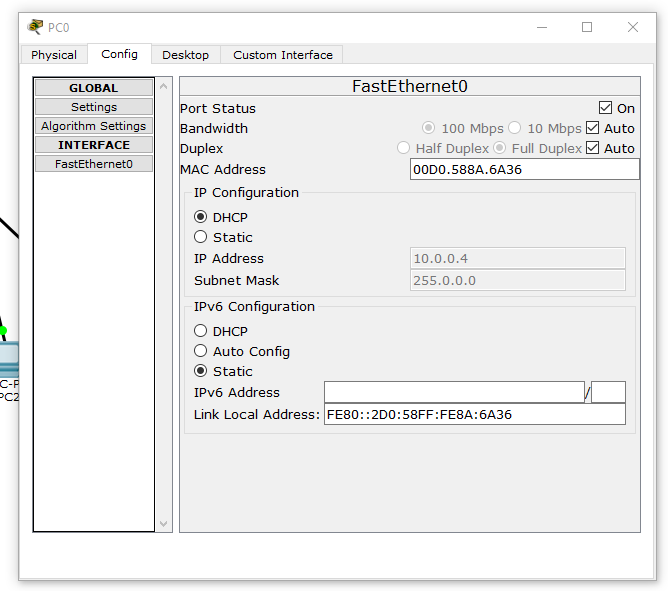


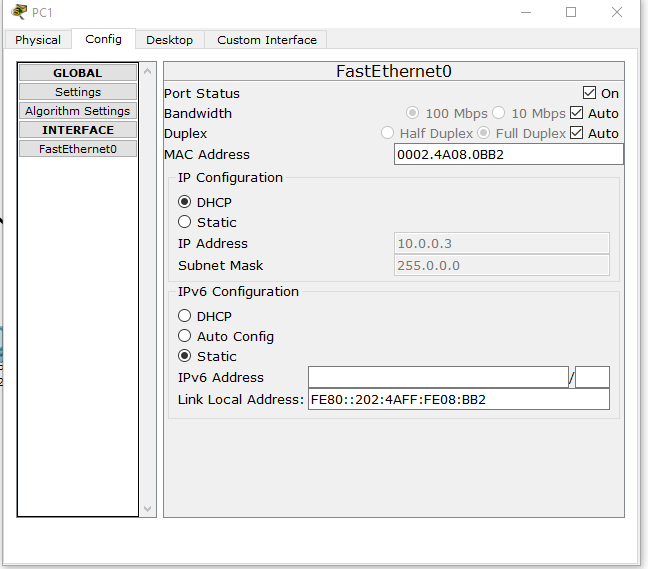


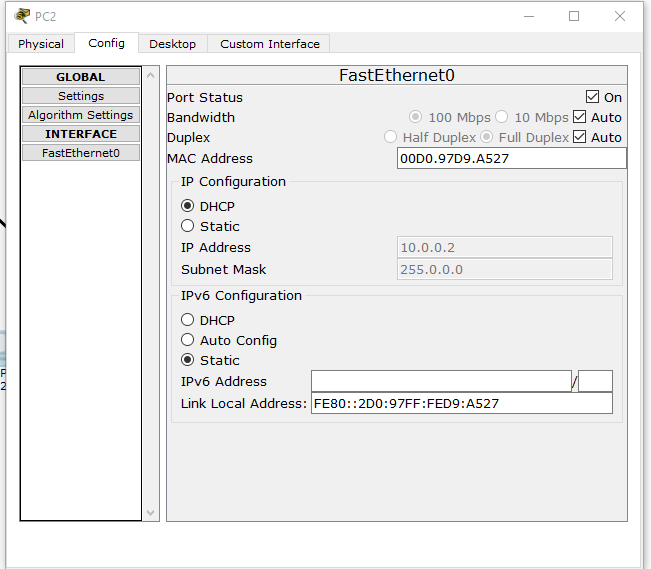
Output



PC Configuration

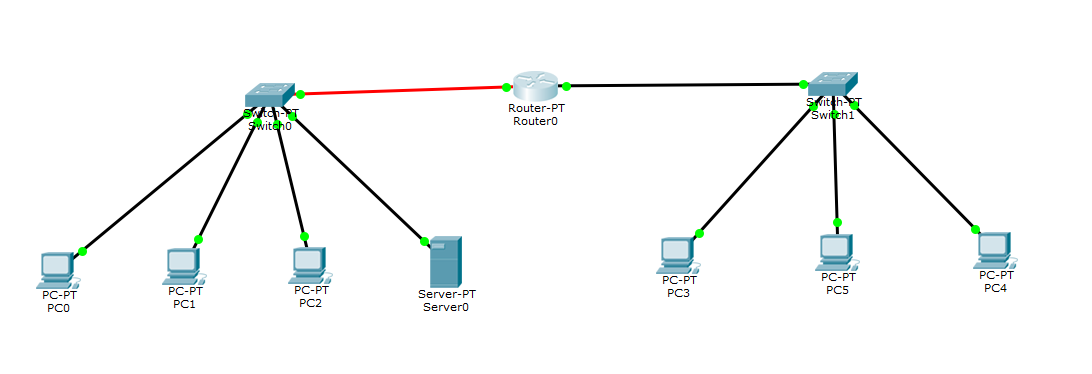




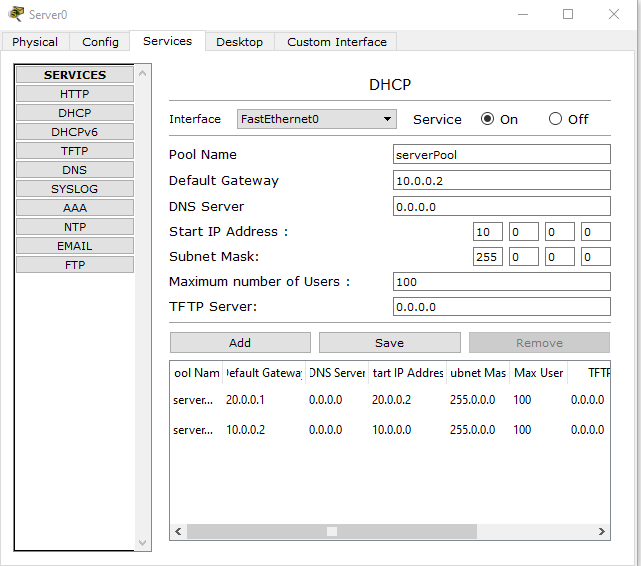


Part 2 – Outer LAN

Topology



Server Configuration



Laboratory Program 5

Part 1

Topology

Output

Part 2